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ABSTRACT

The president of the school board of the Chicago Public Schools (CPS) Illinois mandated that the Student Assessment unit provide training for all CPS teachers on how to help their students score higher on standardized tests. This paper describes the two books developed as training materials and their preparation. The first step was a literature review that culminated in two brief chapters on test-taking skills and improving students' attitudes and motivation. Several chapters discuss the skills measured on the district and state assessments and provide some general hints on preparing students to take tests in these areas. Workshop training sessions focus on developing students' thinking skills using item templates that help teachers make their own questions to measure thinking skills. The overall message of the training sessions and test preparation books is that standardized tests require that students apply critical thinking skills, and if students are accustomed to answering those types of questions on a regular basis in class, they are likely to do better on the tests. It is difficult to evaluate the impact of the workshops and training materials. Test scores have been going up in the CPS, but it is not possible to determine the causal factors. Teachers report seeing the value of teaching and assessing thinking skills. (SLD)

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Surreptitious Inclusion of Good Teaching in Test Preparation Activities

by

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Paper presented at the annual meeting of the American Educational Research Association, New Orleans, April 24, 2000

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I've been director of student assessment for the Chicago Public Schools for 16 years and during that time lots of strange things have come across my desk and I've become pretty jaded. However, I was unprepared for a mailing that told me how I could "see [my] test results soar" on Illinois' Prairie State Achievement Exams. At first glance, this was no different from a lot of advertising circulars that I get all the time, but what was so remarkable was that this particular flyer was hawking a test preparation product for a test that doesn't even exist yet! In fact, not only does the test not exist, but the test specs didn't even exist yet. At that time, the state had not yet decided what form the Prairie State Exams would take. And despite that, someone was already selling test prep materials for it! After thirty years of working for bureaucracies, I've become quite a connoisseur of the absurd and this was something that impressed even me.

The Chicago Public Schools administers assessments that are high stakes for both students and staff. A few years ago the president of our school board mandated that our Student Assessment unit provide training for all CPS teachers on how to help their students score higher on standardized tests. My initial reaction was to cringe. I'd been troubled for many years about the unquestioning, unwavering faith some of our teachers and principals have in test preparation training. They feel that if they give their students enough practice tests, then the kids are sure to do well on the *Iowa Tests*. And if it doesn't work--which is often the case--it was probably because they didn't practice enough, not because the students couldn't read or do math. They would interpret low scores as a sign that they should take away time from reading and math instruction so that there can be even more test prep. I view many of these activities as little more than anxiety-reduction techniques for superstitious grownups and a poor use of time for the kids. My colleagues and I did not relish the thought of contributing to that.

Our task was to figure out how to do this training at our nearly 600 schools and to do it in a way that might actually improve kids' academic skills and not take time away from content area instruction. Because there are so many schools and so few of us, going out to all of our schools wasn't an option, so we decided to write two books, *Preparing Your Elementary Students to Take Standardized Tests* (Borger, et al., 1996a) and *Preparing Your High School Students to Take Standardized Tests* (Borger, et al., 1996b). Both are available at the Chicago Public Schools intranet site (go to http://intranet.cps.k12.il.us, click on "Assessments" and then on "Standardized Test Prep").

We started by scouring the literature on test preparation and summarizing the results in two short chapters on test-taking skills and improving students' attitudes and motivation. These chapters contain suggestions that will come as no surprise to anyone, such as advising the students to follow directions closely, budget time appropriately, read all of the answer choices, and check their work carefully. We stressed the need to integrate those activities with regular instruction, so that test preparation doesn't become a time-consuming add-on. There are also several chapters that discuss the skills measured on our district and state assessments and provide some general tips about how to prepare students to take tests in those areas. For example, in the section on reading, we suggest that teachers

- assist students in developing strategies to use if they're having trouble understanding something they're reading
- ask students to retell stories in their own words, communicating the main idea, identifying sequence, and providing details
- have the students read a wide variety of materials and
- incorporate reading and writing activities in all subject areas.

I think most of us would agree that these are test prep activities we could live with.

While teaching test-taking skills may have its place, a far greater emphasis must be placed on teaching students critical thinking skills. Or to put it another way, no amount of test-taking skills can overcome not knowing how to read or do math. The real heart of our test prep books is a chapter on assessing thinking skills in the classroom. Rick Stiggins observed that the overwhelming majority of questions asked in class were recall questions and he and his colleagues (Stiggins, Rubel and Quellmalz, 1988) developed instructional materials on how to assess thinking skills in the classroom. Over the years we've expanded upon those materials and conducted training for teachers from all levels from preschool to grade 12. The parts of our books that deal with measuring thinking skills was closely based on the work of Rick and his colleagues.

The workshops use Edys Quellmalz's taxonomy, which identifies five categories of thinking skills: recall, analysis, comparison, inference and evaluation (see Figure 1). We make the following points:

- There is a connection between classroom assessment and standardized tests.
- Assessments include not only tests, but oral questions and homework, too.
- It's important to assess *all* students' thinking skills, regardless of age, disability or proficiency in the English language.

[Insert Figure 1 about here]

We encourage teachers to create their own items using the keywords in Figure 1, the question templates shown in Figure 2, or the CPS Performance Assessment Idea Book (accessible from http://intranet.cps.k12.il.us; click on "Assessments" and then on "Ideas and Rubrics"). The fill-in-the blank templates are especially versatile and easy to use.

[Insert Figure 2 about here]

Here are some examples of item templates:

- Recall : What is _____?
- Analysis: How does _____ work?
- Comparison: Compare _____ to _____
- Inference: What do you think would happen if_____?
- Evaluation: In your opinion, what is the best solution to the problem of _____? Why is it the best?

In our workshops we generally ask teachers to use the above templates to write questions in each category that assess knowledge of some leisure time activity they enjoy; they're told it absolutely can't have anything to do with school. For example, some questions we might create using these templates are:

- What is a beignet?
- How does ordering breakfast at Café du Monde work?
- Compare New Orleans to Peoria.
- What do you think would happen if the AERA annual meeting were held in Peoria?
- In your opinion, what is the best solution to the problem of papers whose titles contain the words "deconstructionism," "hermeneutics," "semiotics" or "ontological?" Why is it the best?

We then ask for volunteers who are willing to share their items with the entire group. This helps teachers see that (1) it's easy to generate questions that measure thinking skills and (2) the technique may be used across a broad range of content areas (though we do find that it's not as useful for math as in other subjects). We generally followed this individual activity by a group activity in which teachers team up with colleagues who teach the same grade or subject so that they can develop questions together.

When the test preparation books were first distributed to all of our elementary and high school teachers, we went out to as many schools as we could, but with nearly 600 schools, we had no realistic alternative to using a trainer of trainers model. We knew that was a less than optimal method, so we did what we could to make that method work. Each school was asked to send at least one person to a regional training session and nearly all of them did.

Many people are understandably uncomfortable about attending a brief training workshop and then standing up in front of a bunch of their colleagues and possibly looking like an idiot, so we tried to make things as painless for them as possible. Those who attended our training workshop received a set of PowerPoint overheads keyed to either the elementary or high school test prep book, complete speaker's notes, handouts, and a set of 18 training activities to use with their teachers. An example of one of those activities is shown in Figure 3. We walked them through the whole package and had them take part in a number of the activities. Staff from our office were there to provide moral support and we were also available afterwards for emergency phone consultations and troubleshooting.

[Insert Figure 3 about here]

The message we were trying to send was that standardized tests require students to apply critical thinking skills and if students become accustomed to answering those types of questions on a regular basis in class, they are likely to do better on the tests. We also pointed out that those questions are also likely to make classes more interesting and fun. We tried to convince teachers that (1) it's important to ask the kids something other than recall questions and (2) a question doesn't have to be multiple choice to be good test preparation, so it's not only okay, but desirable, to ask open-ended questions that require students to apply critical thinking skills. We often hear

that use of standardized testing promotes memorization and rote learning, but this has always been puzzling to me, because I can't imagine how memorizing anything would help a student do better on a standardized reading test. Certainly our aim was to get teachers out of the habit of asking mostly recall questions.

The message that it was important to teach and assess thinking skills was reinforced in several ways:

- Information on the categories of thinking skills and assessment keywords were included in the lesson plan books that all CPS teachers must use.
- CPS curriculum materials frequently refer to development of the various categories of thinking skills
- The Illinois State Board of Education used the taxonomy in a number of their assessment-related publications for teachers
- Teachers who write items for our high school course exams are asked to write items that assess students' thinking skills.
- Region staff development meetings usually have sessions on teaching and assessing thinking skills.

So, I hear you wondering, did it work?

Well, it's hard to tell. Nothing happens in isolation and although our test scores have been going up, it's impossible to tell exactly what combination of factors caused that. I'd like to report that trade in commercial test prep materials has come to a screeching halt in Chicago. That hasn't happened–there will always be people looking for what they believe will be an easy way out of the problem of low achievement. And the CPS recently had a consultant develop special test prep lessons exclusively for use in after-school remedial programs. However, I do know that the concentration on assessing

thinking skills has had a profound effect at some of our schools. I called several of the schools that I knew were always ordering more copies of our books and the stories they told were remarkably similar.

- They conducted training for their teachers using the PowerPoint presentations, speaker's notes, and training activities. They found the materials easy to use and appreciated not having to create their own.
- Teachers received laminated copies of the question templates shown in Figure 2 and some got poster-sized versions to hang in their classrooms.
- They got groups of teachers working together to write items that assessed thinking skills. In high schools they met by department and in elementary schools, by grade level. Teachers had the opportunity to swap items with their colleagues, share successes and troubleshoot problems. In all cases, the principals provided time for teachers to meet.
- Lead teachers or administrators encouraged teachers to specifically address thinking skills in their lesson plans.
- Teachers were encouraged to write their own thinking skills items, rather than just use whatever questions happened to be in their textbooks. Some teachers created question templates that were specific to their own subject areas.
- Some faculty members immediately took ownership of the process. Others needed more coaxing, but eventually came on board. A few are still waiting for all this to blow over. However, everyone now knows what thinking skills are and why they're important.
- Efforts were made to make all faculty responsible for teaching and assessing students' thinking skills.
- Support came from unexpected places. One school had a group of enthusiastic art teachers who found ways to incorporate thinking skills into their lessons. Teachers in a vocational education program in food service assigned students readings from *Like Water for Chocolate* and then asked

students questions that required them to apply critical thinking skills. Similarly, a number of health teachers became actively involved in developing and assessing students' thinking skills.

- All of these schools got students involved in learning what thinking skills are, in developing questions, and in critically evaluating their own work.
- Students were asked to justify the answers they gave.
- Teachers were encouraged to actively engage lower-performing students in discussions and assignments to develop their critical thinking skills.
- Though the schools underwent some profound change, teachers were guided in a gentle, non-threatening, non-evaluative way.
- The process of change was slow. It takes several years, but it's worth waiting for. One assistant principal happily reported that her faculty now takes thinking skills instruction and assessment for granted and that their faculty is now complaining about other things instead.
- Student achievement improved.

A funny thing happened when teachers started assessing thinking skills–they realized that they needed to teach thinking skills. Which, of course, was exactly what we had in mind from the start. All of these schools had made a commitment to teaching and assessing thinking skills. They bought into the idea that good teaching is good test preparation. And we learned that it's amazing what you can get people to do if you just call it "test preparation."

References

Borger, J., Cano, M., Collins, C., Evans, W.J., Perlman, C.L., Qualls, J. W., Wood, J.A. (1996a). *Preparing Your Elementary Students to Take Standardized Tests*. Chicago: Chicago Public Schools.

Borger, J., Cano, M., Collins, C., Evans, W.J., Perlman, C.L., Qualls, J. W., Wood, J.A. (1996a). *Preparing Your High School Students to Take*

Standardized Tests. Chicago: Chicago Public Schools.

Stiggins, R., Rubel, E., Quellmalz, E. (1988). Measuring Thinking Skills in the Classroom. West Haven, CT: National Education Association.

Quellmalz Framework of Thinking Skills

Category	Recall	Analysis	Comparison	Inference	Evaluation
Description	Remembering or recognizing key facts, definitions, concepts, etc., repeating verbatim or paraphrasing information that has already been provided to the student.	Understanding relationships between the whole and its component parts and between cause and effect, sorting and categorizing, understanding how things work and how the parts of something fit together, understanding causal relationships; getting information from charts, graphs, diagrams, and maps. Analysis is more than rote repetition; instead it involves reflectively structuring knowledge in new ways.	Explaining how things are similar and how they are different. Comparisons may be either simple or complex. Simple comparisons are based on a small number of very obvious attributes. Complex comparisons require an examination of a more extensive set of attributes of two or more things. Comparisons start with the whole/part relationships in the analysis category and carry them a step further.	Reasoning inductively or deductively. In deductive tasks, students reason from generalizations to specific instances and are asked to recognize or explain the evidence. In inductive tasks, students are given the evidence or details and are required to relate and integrate the information to come up with the generalization.	Expressing and defending an opinion. Evaluation tasks require students to judge quality, credibility, worth or practicality using established criteria and explain how the criteria are met or not met.
Sample Trigger Words	define list label name identify repeat who what when	sort categorize classify sequence functions purpose analyze break down relationship how it works how it's used give an example	compare contrast distinguish alike different	hypothesize synthesize use evidence apply a rule generalize create what if infer predict conclude apply solve	judge evaluate best solution justify defend critique defend
Sample Questions and Tasks	Define the word "haiku." List the countries in Central America. In what year did the Civil War begin? Who wrote *Little Women*? How much is 3 + 5? What is the capital of Illinois? With what kind of music is Scott Joplin associated? What is software? Name the basic food groups.	Sort these musical instruments by family, for example, strings, woodwinds, etc. In what sequence did the events take place? How does a solar panel work? How does the poet create a mood of sadness? Use the bar graph to determine which three flavors of ice cream are the most popular. What process was used to create this sculpture? Classify these angles as acute, right or obtuse.	In what ways are walruses and seals alike? In what ways do they differ? Compare the topography of the eastern part of the U.S. with that of the west. Compare your life with that of a young native American living near the Plymouth colony 300 years ago. Compare the techniques of persuasion used in these two political commercials. How is the tango like the waltz? How do they differ?	What would happen if everybody stopped watching television? Predict what will be the result if you combine vinegar and baking soda. What rule applies in this situation? What is the main idea of the story? Based on your research, what can you conclude about the role of lobbyists in shaping legislation? Predict how the story will end.	Is experiment designed so that Paul will be able to tell whether playing music influences plant growth? Why? What is the best solution to the problem of getting people to recycle? Why? Do you believe the claims made in the ad? Why or why not? Was our involvement in Viet Nam worth the costs? Why? Should the death penalty be abolished? Why?
Corresponding Bloom Categories	Knowledge Comprehension	Analysis	Analysis	Application Synthesis	Synthesis Evaluation

Adapted from *Measuring Thinking Skills in the Classroom, Revised Edition*, by Richard J. Stiggins, Evelyn Rubel and Edys Quellmalz. National Education Association, 1988.

Figure 1

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Figure 2

Question Templates

Recall

Note: Any question becomes a recall question if the answer has already been explicitly provided to the student in class or in the text.

When did _____ take place?

List the _____.

Define the term _____.

What is a _____?

Who did _____?

Name _____.

Analysis

How does _____ work?

Sort these _____.

What caused _____?

What is another possible cause of _____?

Use the table to determine _____.

Use the graph to determine _____.

Graph _____.

Outline the _____.

Based on the written description, draw a diagram.

Draw your own map of _____ without tracing or copying.

Use the map to determine _____.

In what sequence did _____ happen?

Break _____ down into its component parts.

Give an example of _____.

What literary form is being used?

What technique is being used?

What information is needed?

Is the information relevant?

Into what groups can you organize these?

Draw a picture that illustrates what is described in the story _____.

What does _____ symbolize?

Find examples of [a literary device] in your readings.

Analyze the _____ in _____.

Classify these _____ according to _____.

Separate the _____ from the _____.

Translate _____.

Analyze how _____.

Explain how _____works.

How did the author convey _____?

How is/are _____ used to _____?

What kind of a _____ is this?

Which one does not belong in this group?

What is the function of _____?

What is the purpose of _____?

What is the relationship between _____ and _____?

Is there a pattern here? What is the pattern?

Use manipulatives to illustrate a concept.

Build a model of _____.

Measure _____.

What words does the author use to paint an image of _____in your mind?

Comparison

How is _____ like _____?

How are _____ and _____ different?

Compare the _____ before and after _____.

Which one is the biggest/oldest/tallest?

Compare the character _____ at the beginning of the story and at the end.

Distinguish between _____ and _____.

Compare _____ with _____.

On what dimensions might you compare _____ and _____?

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Inference

Hypothesize what will happen if _____.

Predict what will happen if _____.

Apply the rule to _____.

Solve the problem _____.

Predict how _____ will end.

What do you think will happen?

What is the main idea of _____?

What is the overall theme of _____?

What is the moral of _____?

Develop a plan to _____.

Propose and describe an invention that fills some need.

What is the best title for this reading selection?

Write a research paper on _____.

Based on your readings, what can you conclude about _____?

What was the author's point of view?

Solve a logic puzzle.

What if _____?

What rule applies here?

What generalization can you make from this information?

Create a _____.

Design a _____.

What clues are you given about _____?

Evaluation

Was _____ worth the costs? Explain your answer.

Was the argument convincing? What makes you think so?

Did _____ behave appropriately? Why?

What would you have done in this situation? Why?

Write a critique of _____.

Was this experiment well designed? Defend your answer.

Decide the best solution to the problem of _____. Why do you think so?

How well are the conclusions supported by the data/ facts/evidence? Explain.

Whose argument is stronger? Why do you think so?

Write a letter to the editor stating your position on ___.

Develop criteria for judging the quality/ soundness/ credibility of _____.

Was this real or imaginary? What makes you think so?

Is this fact or opinion? What evidence points to that?

Did _____ choose a wise course of action? Give reasons.

Apply a scoring rubric to this piece of work. Explain why you are assigning each score.

What would you have done in this situation? Why?

Review a book, performance or exhibit. Justify your evaluation.

Which _____ is the best? Why do you think so?

Whose evidence was more convincing? Why?

Whose arguments were most convincing? Why?

If you were the judge, what would your decision be? Why?

Give and justify your opinion on _____.

Write a persuasive essay on _____.

What might be a better solution to this problem. Explain why it is better.

Note that the different thinking skills build upon each other and that a single question or task may sometimes require students to use more than one category of thinking skills.

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Activity E-1

Creating HOTS Questions

Chapters 6-9 contain detailed information on the kinds of skills measured on ITBS and IGAP. As you can see, the overwhelming majority of questions require the student to apply higher order thinking skills **(HOTS)**. If students are to do well on ITBS and IGAP, it is necessary for them to practice answering those kinds of questions in everyday classroom situations.

The categories of thinking skills are summarized on p. 23. Analysis, comparison, inference and evaluation are all considered higher order thinking skills. If you have not already done so, please take a moment to review the chart on that page. Also, take a look at the tables of fill-in-the-blank HOTS questions shown on pages 25-26. These templates or "cookbooks" provide an easy way to create questions that assess your students' thinking skills.

Select a unit you are teaching or a story your students are reading (or that is being read to them). Using the templates on pages 25-26, create HOTS questions that you will ask your students:

- in a class discussion,
- on a homework assignment, and
- on a quiz or test.

Develop questions that assess analysis, comparison, inference and evaluation. You may find it helpful to use an assessment planning chart to organize your questions. A blank assessment planning chart may be found at the beginning of the Appendix.

Make a special effort to include HOTS questions in all classroom discussions and assessments. By doing so, you will give your students valuable preparation for ITBS and IGAP. As a bonus, the HOTS questions will make class discussions more interesting and fun for both you and your students.

See pages 25-26 for recipes for HOTS questions.